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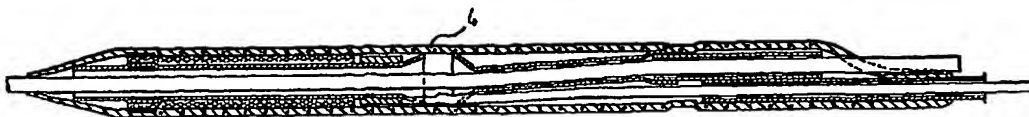
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(54) Title: TRANS-LUMINAL SURGICAL DEVICE



(57) Abstract: A device for trans-luminal delivery of a self-expanding stent or other surgical device and which is designed for rapid exchange over a guidewire has a guidewire lumen that adjacent its proximal exit port lies side-by-side with the line of the shaft of the device. A sleeve which surrounds and confines the stent has a proximal end that is shaped around the guidewire exit port to show in profile a shape reminiscent of the nose of a dolphin. In preferred embodiments, the sleeve also has a tapered distal tip that is withdrawn proximally over the length of the stent to release it, progressively, from its distal end. The configuration delivers simplicity of design, enhanced performance and reliability in use.

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# INTERNATIONAL SEARCH REPORT

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 03/002020 A (SALVIAC LIMITED) 9 January 2003 (2003-01-09) page 14, line 26 - page 21, line 2; figures 1-3j -----	1

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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WO 03002020 A	09-01-2003	CA 2449961 A1	09-01-2003
		CA 2449981 A1	09-01-2003
		EP 1399084 A1	24-03-2004
		EP 1408873 A1	21-04-2004
		EP 1399085 A1	24-03-2004
		EP 1399095 A1	24-03-2004
		WO 03002018 A2	09-01-2003
		WO 03002019 A2	09-01-2003
		WO 03002020 A2	09-01-2003
		WO 03002033 A1	09-01-2003
		IE 20020529 A1	30-12-2002
		IE 20020530 A1	05-03-2003
		IE 20020532 A1	05-03-2003
		IE 20020533 A1	28-05-2003
		IE 20020535 A1	28-05-2003
		US 2003097095 A1	22-05-2003
		US 2003093110 A1	15-05-2003
		US 2003125751 A1	03-07-2003
		US 2003109886 A1	12-06-2003
		US 2003093106 A1	15-05-2003